PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	:	
PAUL D. MARKO et al.	:	Group Art Unit: 2611
Serial No.: 09/695,228	:	Examiner: Hai V. Tran
Filed: October 25, 2000	:	
For: METHOD AND APPARATUS FOR IMPLEMENTING FILE TRANSFERS TO RECEIVERS IN A DIGITAL BROADCAST SYSTEM	:	

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Commissioner for Patents
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is an appeal pursuant to 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1 – 21 as set forth in the Office Action of June 30, 2005.

I. Real Party in Interest

The real party in interest in this application and the appeal is XM Satellite Radio Inc. by assignment recorded February 28, 2001 on Reel 011544, Frame 0098.

II. Related Appeals and Interferences

There are no other related patents or applications related to this invention on appeal or that are involved in an interference proceeding.

III. Status of Claims

Claims 1 – 21 stand finally rejected and are the subject of this appeal. Claims 1-21 are reproduced in the Claims Appendix (Section VIII).

IV. Status of Amendments

No amendments were filed subsequent to the June 30, 2005 final rejection.

V. Summary of the Claimed Subject Matter

Briefly, the present invention is directed to a receiver, as recited in independent claim 1, for receiving, processing and storing segments in a data file that were interspersed in a broadcast signal. The receiver monitors the progress of receiving the segments that constitute the data file. The present invention is also directed to methods of transmitting and receiving segments from partitioned data files that are interspersed in a broadcast signal, as recited in independent claims 13 and 17, respectively. The present invention partitions and transmits data files as claimed to minimize impact on system bandwidth requirements for transmitting other broadcast content (see page 2, line 20 to page 3, line 2) and does not require a back channel between a receiver and a broadcast station to overcome data loss due to obstructions, interference or other interruptions during file transfer (see page 3, lines 18-21).

Independent claim 1 is directed to a receiver 14 in a digital broadcast system 10 (page 5, lines 21-30; Fig. 1). The receiver 14 (Fig. 7) has a memory device 50 (page 9, lines 6-14), a reception device 52, 55, 58 and a processing device 60 (page 9, line 15 to page 10, line 16). The memory device 50 stores content transmitted in a broadcast signal 30 (Fig. 2, page 6, lines 7-16 and page 7, lines 25-27) using the digital broadcast system 10. The content comprises data files 34 (Fig. 3, page 7, lines 5-6 and 18-20). The data files 34 are each partitioned into segments 36 (Fig. 4, page 7, lines 19-23) that are interspersed in the broadcast signal 30. The broadcast signal is provided with at least one header 37 (Fig. 5, page 7, lines 24-25 and page 7, line 29 to page 8, line 8) comprising information 42 indicating the number of said segments that constitute at least one of said data files and information 41 to identify each of said segments (Fig. 5, page 8, lines 4-7). The reception device receives the broadcast signal 30 and processes the broadcast signal to obtain at least part of the content including those segments 36 corresponding to at least one of the data files 34 therein (page 9, line 29 to page 10, line5). The processing device 60 connected to the memory device 50 and the reception device 52, 55 and 58 is programmable to allocate at least one section in the memory device 50 for storing the data file 34, to store the segments 36 corresponding to the data file 34 in the allocated section (page 10, lines 17-26), and to monitor the progress of the storage of the segments in said allocated section (page 11, lines 9-26)

Independent claim 13 is directed to a method of transmitting content comprising data files 34 (Fig. 3, page 7, lines 18-21). The method comprises assigning each of said data files 34 a message identification code 38 (Fig. 5, page 7, line 28-30, page 8, lines 12-14, page 10, lines 8-14) to indicate which of a plurality of receivers in said digital broadcast system are to receive the corresponding data file. The method also comprises partitioning the data files 34, each being partitioned into segments 36 (Fig. 4, page 7, lines 19-23). The method involves assigning the segments 36 in respective data files 34 with unique identification codes that indicate the order of the segments in a corresponding one of the data files 34 (page 7, line 29 to page 8, line 1 and page 8, lines 3-7). The segments are interspersed in the broadcast signal 30 (page 7, lines 21-23). The broadcast signal 30 is provided with segment headers 37 for respective ones of the segments 36 that each comprise a corresponding the message identification code 38, a first field 42 indicating the total number of the segments in the corresponding one of the data files 34, and a second field 41 indicating the identification code of the segment (Fig. 5, page 7, line 28 to page 8, line7).

Independent claim 17 is directed to a method of implementing a file transfer from a broadcast station 18, 20 to a receiver 14 in a digital broadcast system 10 (Fig. 1, page 7, lines 18-21, page 8, lines 15-16). The method involves receiving a broadcast signal 30 having content, the broadcast signal having content comprising data files 34 (Figs. 2 and 3, page 9, lines 7-9). The data files 34 are each being partitioned into segments 36 (Fig. 4, page 7, lines 18-23) that are interspersed in the broadcast signal 30. The broadcast signal 30 is provided with at least one header 37 comprising information 42 and 41, respectively, indicating the number of segments that constitute at least one of the data files 34 and identifying each of the segments (Fig. 5, page 8, lines 4-7). The method involves selecting one of the data files 34 to store in a memory device 50 (page 9, lines 23-28), and allocating a portion of the memory device 50 that corresponds in size to the number of the segments 36 that constitute the selected data file 34 (page 10, 17-21). The information 41, 42 in the at least one header 37 is analyzed to identify the segments 36 received via the broadcast signal 30 and corresponding to the selected data file (page 8, lines 4-7, page 9, line 29 to page 10, line 5, page 11, lines 23-26). The segments are then stored in the portion of the memory device that corresponds to the selected data file (page 10, lines 4-5).

VI. Grounds of Rejection to be Reviewed on Appeal

The grounds of rejection for review on appeal are:

(1) whether independent claims 1 and 17 and dependent claims 3-5, 9, 12 and 18 are unpatentable under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,801,536 to Foster et al.;

(2) whether dependent claims 2, 10 and 19 are unpatentable under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,801,536, to Foster et al., in view of U.S. Patent No. 5,732,324, to Rieger, III;

(3) whether independent claim 13 and dependent claims 6, 7, 14-15 and 20-21 are unpatentable under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,801,536, to Foster et al., in view of U.S. Patent No. 5,815,671, to Morrison;

(4) whether dependent claim 11 is unpatentable under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,801,536, to Foster et al., in view of U.S. Patent No. 5,732,324, to Rieger, III, and U.S. Patent No. 5,815,671, to Morrison; and

(5) whether dependent claims 8 and 16 are unpatentable under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,801,536, to Foster et al., in view of U.S. Patent No. 5,815,671, to Morrison, and U.S. Patent Application Publication No. 2003/0212996, to Wolzien.

VII. Arguments

A. Claims 1, 3-5, 9, 12, 17 and 18 Are Not Anticipated by U.S. Patent No. 6,801,536 to Foster et al.

1. Independent Claim 1 Is Not Anticipated

Independent claim 1 is directed to a receiver in a digital broadcast system having a memory device for storing:

> "*content transmitted in a broadcast signal* using said digital broadcast system, the content *comprising data files*,
>
> said data files each being *partitioned into segments that are interspersed in said broadcast signal*,
>
> *said broadcast signal being provided with at least one header comprising information indicating the number of said segments that constitute at least one of said data files and information to identify each of said segments*", among other recited elements.

These elements are not disclosed or suggested by the Foster et al patent. The Foster et al patent (hereinafter Foster et al.) discloses a system for buffering MPEG transport streams in a set-top box. The set-top box depicted in Fig. 2 of Foster et al divides an MPEG transport stream 210 into sub-blocks. The Examiner states that Foster et al teaches the present invention as claimed because the system therein "creates 'subblocks prior to transport' and therefore teaches data files partitioned into segments interspersed in a broadcast signal."

As discussed in more detail below, Foster et al does not anticipate the claimed invention because:

a) the subblocks described in Foster are generated at the set-top box and therefore after transmission; and

b) the Examiner cannot arbitrarily switch between the teachings of packets in the transport stream 210 and the subblocks built at the set-top box to state which aspects of the system disclosed in Foster et al purportedly teach the recited segments in the broadcast signal.

a) Subblocks of Foster et al do not anticipate claimed segments

The subblocks in Foster et al cannot be argued to teach segments as claimed since they are created at the STB and therefore after transport. Blocks 310 and 340 in Fig. 3 of the Foster et al patent clearly indicate that the system in the Foster et al patent receives a transport stream and then builds sub-blocks. The Foster et al patent does not create sub-blocks prior to transport and therefore does not teach or suggest storing content in a broadcast signal having data files partitioned into segments interspersed a broadcast signal, as claimed.

There are numerous passages throughout the text of Foster et al that describe defining and building subblocks and data blocks at the set-top box (STB) and therefore *after transport and after reception* of a transport stream. The STB receives a transport stream 210 (e.g., packets of 188 bytes including a four byte header) at demultiplexer 110, and converts it to a packetized elementary stream format (PES) including separate audio and video streams that are provided to separate queues (see column 3, line 61 to column 4, line 2 and column 4, lines 38-41). A byte-to-interrupt (BTI) signal determines when subblocks are formed *in the* STB and sent to a queue in the STB (see column 6, lines 1-49). This is most plainly evident from Fig. 3 of Foster et al, where it is clearly shown that the transport stream is *received* (block 310), *and then* the subblocks are defined via queues for audio and video (block 320), *and then* the sub block headers are built (block 340), as described at column 5, line 43 through column 6, line 49 of Foster et al. See also Fig. 1 where a transport stream is input to a transport demux 110 of a STB chip 100. See also Fig. 2 where the transport demux 220 of the STB chip has audio and data buffers 222A and 222V. As stated at column 6, lines 23-25 of Foster et al, a bytes-to-interrupt (BTI) signal is a "rolling interrupt that indicates when a given number of bytes (in 256 byte increments), *forming sub-blocks* (emphasis added) have been sent to a queue." Thus, the subblocks are created at the STB chip 100 and therefore after transport. See also column 5, lines 56 and 57 which states that the transport packets *are received* in the correct order which enables the buffers 222A and 222V to be in the transport demultiplexer of the STB (i.e., transport

demultiplexer 220 in Fig. 2 or transport demultiplexer 110 in Fig. 1). See column 6, lines 38-42 of Foster et al which state "Upon the issuance (330 of Fig. 3) of each BTI interrupt and as a data block is sent to multiplex buffer 280, a *header is created* (emphasis added) for each sub block...." The "information for the header is *developed concurrently* (emphasis added) with the storage of data subblocks to the multiplex buffer 280. As stated at column 6, lines 45-49 of Foster et al, sub block and their headers are read out from buffers by queuing for storage. Thus, all of these receiving, buffering/queuing, sub block and header building operations are performed *at the STB after the transport stream* 110 (Fig. 1) or 210 (Fig. 2) *is received.* See also the claims of Foster et al. Claim 2 of Foster et al recites steps for defining subblocks using BTI values and queuing controlled by same. Claim 5 recites building a header after buffering and defining subblocks. To interpret the transport stream to the STB in Foster et al as already having subblocks prior to transport is contrary to the disclosure in Foster et al.

Further, neither the packets in the transport stream 210 nor the sub-blocks in Foster et al indicate the number of segments that constitute a partitioned file nor identify each segment, as claimed in claim 1. The bytes-to-interrupt (BTI) values of Foster et al relied on in the final Office Action are added at the set-top box and therefore after transport. Further, the BTI values are merely time reference stamps that do not indicate the number of segments that constitute a data file in a broadcast signal, as claimed.

b) Improper combination of packets in the transport stream and subblocks at the set-top box of Foster et al

If the packets in the transport stream of Foster et al could arguably be considered data files as claimed, then the recitations in claim 1 regarding storing and monitoring progress of segments of a data file cannot be met by the processing of the transport data stream packets at the STB. The Office Action apparently analogizes packets in a transport stream 210 of Foster et al to be data files as claimed, and bytes in those packets to be segments as claimed. This is incorrect since the bytes of a packet are not interspersed in the transport stream of Foster et al, in contrast to segments of the data file recited in claim 1 being interspersed in a broadcast signal. Secondly, the buffers 222A and 222V in Foster et al do not monitor progress of storage of bytes in a particular packet, nor even the progress of storing packets. Mere sizing of a buffer to control

when it is filled and when it is read from does not constitute monitoring progress of reception of bytes associated with a packet. Also, it is impermissible to change the apparent analogy in the Office Action to purport that a packet in Foster et al teaches a segment as claimed, rather than a transport packet byte, since there is no discussion in Foster et al of relating the packets to a particular data file that has been partitioned into packets. For example, unlike the claimed invention, there is no disclosure or suggestion in Foster et al of a file being segmented into a plurality of packets, and a header being provided in the transport stream to indicate the number of packets that constitute that file. The headers of the transport stream packets of Foster et al merely identify the type of data (e.g., audio or video) in the packet, but do not relate the packets to others that constitute a data file, unlike the claimed segments and header

In the Office Action, the Examiner is using text and selected words in Foster et al out of context and therefore impermissibly to purportedly teach the claimed invention. For example, column 3, lines 65-67 of Foster et al relied on by the Examiner merely describe how the MPEG transport stream 110 is converted to a compressed and encoded packetized elementary stream (PES) format by the *STB* chip 100 (see column 3, lines 61 and 62). As stated in column 4, lines 38-43, the *STB* (emphasis added) separates audio and video data from the transport stream into two packetized elementary streams (PESs) and the granularity of the PESs is coarser than the relatively small packet size of the transport stream.

The Office Action also references column 4, lines 55-67 and column 5, lines 43-67 of Foster et al to purportedly teach a transmission signal made up of packets having a header as claimed. First, as stated above, the packets and packet bytes of the transport stream of Foster et al bear no analogy to the recited data files and segments. Second, the text at column 4, lines 55-67 of Foster et al has been mischaracterized in the Office Action. The text merely states how a transport packet header can indicate the number and correspondence of transport stream bytes in transport stream packets to packets *in PES steams created at the STB* (e.g., the PES packets are large compared to the size of the transport packets). The PESs, however, are created at the STB as stated above and therefore cannot teach or suggest a data file as claimed.

The Office Action refers to column 5, lines 43-55 to purportedly teach the data files, segments and headers as recited in claim 1. This text, however, refers to interspersing transport

stream packets into PES streams that are *created at the STB*, and therefore does not teach or suggest segments interspersed in a broadcast stream *prior to transport*.

In view of the above, Foster et al fails to teach or suggest the invention recited in claim 1.

2. Dependent Claim 3 Is Not Anticipated

Claim 3, which depends from claim 1, recites a header comprising data to indicate how much of the memory device needs to be allocated to store the data file, among other elements.

The header recited in claim 3 is in the broadcast signal. The references to Foster et al relied on in the Office Action that refer to a header created for a sub-block do not disclose or suggest the claimed invention since these headers are generated at the set-top box and not transmitted in a broadcast signal, as claimed. The references to Foster et al relied on in the Office Action that refer to a transport stream header also do not disclose or suggest the claimed invention since these transport headers merely indicate data type but not size of a data file to which the packets corresponding to the transport header may belong.

Further, the Office Action appears to suggest that packets in Foster et al teach data files as claimed, and that bytes in the packets teach segments as claimed. This is incorrect for reasons stated above with respect to claim 1. In addition, there would be no need for a header as recited in claim 3 since the packet size is known (i.e., 188 bytes including a four byte header). Further, Foster et al does not teach, for example, providing a transport stream packet with data indicating the size of the buffers 222A and 222V that store the transport packets. In addition, the storage area for the subblocks and data blocks also does not teach in the invention recited in claim 3 since the sub blocks are built at the STB from PES using BTI signals and therefore have no relation to a packet in the transport stream which the Examiner purports to be a data file as claimed. The size of these data blocks is determined at the STB (see column 6, line 1 to column 7, line 8).

Thus, Foster et al does not anticipate the invention recited in claim 3.

3. Dependent Claims 4 and 5 are Not Anticipated

Claim 4, which depends from claim 1, recites segments being assigned unique identification codes that indicate their order in the data file, and the header comprising segment headers for respective ones of the segments. As recited in claim 1, the header is in the broadcast signal. The segment headers in the header each comprise a first field indicating the total number of segments in the data file, and a second field indicating the corresponding one of the identification codes. Claim 5, depends from claim 4.

With regard to the rejection of claims 4 and 5, the headers taught by Foster et al and relied on in the Office Action are generated at the set-top box and are not sent in a broadcast signal, as claimed.

Thus, Foster et al does not anticipate the invention recited in claims 4 and 5.

4. Dependent Claim 12 Is Not Anticipated

Claim 12, which depends from claim 1, recites a memory device comprising a first portion for storing respective ones of the data files for which all of the corresponding segments have been received, and a second portion for storing at least part of other data files while their segments are being received.

With regard to the rejection of claim 12, the Office Action merely relies on sections of Foster et al describing the buffers 240A and 240V for storing sub-blocks, or buffering of data prior to storage on a mass storage device such as an HDD. Foster et al, however, does not disclose or suggest determining whether all segments of a data file are received (e.g., the data file being recited in claim 1, from which claim 12 depends, as having a header indicating the number of segments that constitute the data file, and being provided the header prior to transport in a broadcast signal), and then storing completely received and incompletely received data files in respective portions of a memory device.

The Office Action states that the queuing buffer system disclosed in Foster et al purportedly teaches the invention recited in claim 12, that is, first and second portions of memory for storing, respectively, complete data files and data files for which segments are still being received. This is incorrect. First, the buffers relating to the subblocks and data blocks (e.g., buffers 240A, 240B and 280 in Fig. 2 of Foster et al) cannot teach or suggest the portions

of memory as claimed since they store blocks of data defined and built at the STB and not a data file in the transport stream. Secondly, Foster et al is silent regarding when a transport packet or byte therein is not received at the buffers 222A and 222V.

Thus, Foster et al does not anticipate the invention recited in claim 12.

5. Dependent claim 9 is not anticipated

Claim 9, which depends from claim 1, recites the header in the broadcast signal providing a unique identification code for each of the segments belonging to the data file and indicating in what order the segments are to appear in the data file for playback. The processing device determines which of the segments in the data file have not been received and stored in the memory device.

Regarding claim 9, Foster et al does not teach or suggest the STB determining which packets or bytes in packets have not been received. The text at column 5, lines 43-67 of Foster et al merely states that the transport packets are received in order, and is silent as to what happens if a transport packet is dropped. Also, the recited information for determining receipt of segments is in the header in the broadcast signal. Foster et al does not disclose or suggest such information in the transport stream 210.

Thus, Foster et al does not anticipate the invention recited in claim 9.

6. Independent Claim 17 Is Not Anticipated

Claim 17 recites content received in a broadcast signal. Like claim 1, claim 17 also recites "content *comprising data files*, said data files each being *partitioned into segments that are interspersed in said broadcast signal, said broadcast signal being provided with at least one header comprising information indicating the number of said segments that constitute at least one of said data files*," as well as information *"identifying each of said segments"*, among other features. Thus, Applicants submit that Foster et al does not disclose or suggest a method as recited in claim 17 for the same reasons stated above with regard to claim 1. Further, claim 17 recites, after selecting a data file received in a broadcast signal, the steps of "allocating a portion of said memory device that corresponds in size to the number of said segments that constitute said selected data file; analyzing said information in said at least one header to identify said

segments received via said broadcast signal and corresponding to said selected data file; and storing said segments in said portion of said memory device that correspond to said selected data file." Foster et al does not disclose selecting a data file received from a broadcast signal that is characterized in the broadcast signal by a header indicating the number of segments that constitute the data file. Thus, Foster et al does not disclose or suggest analyzing a header in a broadcast signal to identify segments in a selected data file for storage.

In view of the foregoing, Foster et al does not anticipate the invention recited in claim 17.

7. Dependent Claim 18 Is Not Anticipated

Claim 18, which depends from claim 17, recites the step of monitoring which of the segments corresponding to the selected data file have not yet been received and stored in the allocated portion of the memory device.

Foster et al does not teach or suggest the STB determining which packets or bytes in packets have not been received. The text at column 5, lines 43-67 of Foster et al merely states that the transport packets are received in order, and is silent as to what happens if a transport packet is dropped.

The text at column 8, lines 15-35 in Foster et al and relied on in the Office Action refer to merely monitoring for when a buffer is full to initiate a transfer. The buffer in question is for data blocks *created at the STB* which are not the packets or packet bytes in the transport packet stream that have been apparently compared in the Office Action to the claimed segments of data file in a broadcast stream. Further, dumping a buffer when it is merely full does not teach monitoring for *which* segments in a selected data filed have not yet been received as claimed.

Further, Foster et al does not perform monitoring as claimed, as the Office Action appears to suggest. The filling of buffers, as taught by Foster et al and relied on in the Office Action, does not teach or suggest monitoring those segments of a selected data file, which are identified via a header in a received broadcast signal, are not yet received and stored. Nothing in the description of the transport headers or sub-blocks teaches or suggests determining which segments in a data file have not been received. The buffers employed by Foster et al are merely sized to guarantee no overflow and have nothing to do with the number of segments identified in a broadcast data file (see column 5, lines 65-67 and column 6, lines 17-22 of Foster et al).

Thus, Foster et al does not anticipate the invention recited in claim 18.

In view of the foregoing, Applicants respectfully request withdrawal of the 35 U.S.C §102(e) rejection of claims 1, 3-5, 9, 12, 17 and 18 as being anticipated by U.S. Patent No. 6,801,536, to Foster et al.

B. Claims 2, 6- 8, 10, 11, 13-16 and 19 Are Not Obvious Over U.S. Patent No. 6,801,536 to Foster et al. in view of Cited Secondary References

1. Dependent Claim 2 Is Not Obvious

In the Office Action, claim 2 is rejected under 35 U.S.C §103(a) as being obvious over Foster et al in view of U.S. Patent No. 5,732,324, to Rieger III (hereinafter "Rieger III"). Claim 2 recites generating an alert message when segments in a data file are received. As recited in claim 1 from which claim 2 depends, a data file is characterized in a broadcast signal by a header indicating the number of segments that constitute the data file. Rieger III is relied on for its purported disclosure of alerting a user when data segments have been stored in a memory device as claimed in claim 2.

Applicants respectfully submit that Rieger III does not disclose such alerting, and that the Rieger III does not overcome the deficiencies of Foster et al. Rieger III teaches sending audio programs from low power transmitters to proximate digital burst radio (PDBR) receiving units in motor vehicles. The programs have preambles identifying programs by a brief textual description and date or creation. Thus, Rieger III does not teach a header comprising information indicating the number of segments that constitute a data file. Rieger III merely teaches that a receiving unit can use the preamble to filter previously received programs based on the brief textual description and date of creation in the preamble. Rieger III, however, cannot use the preamble to "monitor the progress of storage of said segments" as recited in claim 1. Rieger III merely teaches determining if an entire program is received and stored, and not its progress.

Thus, claim 2 is not obvious over Foster et al in view of Rieger III.

2. Dependent Claim 10 Is Not Obvious

In the Office Action, claim 10 is also rejected under 35 U.S.C §103(a) as being obvious over Foster et al in view of U.S. Patent No. 5,732,324, to Rieger III (hereinafter "Rieger III"). Claim 10, depends from claims 1 and 9. Neither Foster et al nor Rieger III teach or suggest determining which segments, as recited in claim 1, have been stored.

Applicants respectfully submit that Rieger III does not overcome the deficiencies of Foster et al stated above. Rieger III teaches sending audio programs from low power transmitters to proximate digital burst radio (PDBR) receiving units in motor vehicles. The programs have preambles identifying programs by a brief textual description and date or creation. Thus, Rieger III does not teach a header comprising information indicating the number of segments that constitute a data file. Rieger III merely teaches that a receiving unit can use the preamble to filter previously received programs based on the brief textual description and date of creation in the preamble. Rieger III, however, cannot use the preamble to "monitor the progress of storage of said segments" as recited in claim 1. Rieger III merely teaches determining if an entire program is received and stored, and not its progress.

Thus, claim 10 is not obvious over Foster et al in view of Rieger III.

3. Dependent Claim 19 Is Not Obvious

In the Office Action, claims 19 is also rejected under 35 U.S.C §103(a) as being obvious over Foster et al in view of U.S. Patent No. 5,732,324, to Rieger III (hereinafter "Rieger III"). Claim 19 depends from independent claim 17. Neither Foster et al nor Rieger III teach or suggest determining which segments, as recited in claim 17, have been stored.

Applicants respectfully submit that Rieger III does not overcome the deficiencies of Foster et al stated above. Rieger III teaches sending audio programs from low power transmitters to proximate digital burst radio (PDBR) receiving units in motor vehicles. The programs have preambles identifying programs by a brief textual description and date or

creation. Thus, Rieger III does not teach a header comprising information indicating the number of segments that constitute a data file. Rieger III merely teaches that a receiving unit can use the preamble to filter previously received programs based on the brief textual description and date of creation in the preamble. Rieger III, however, cannot use the preamble to store rebroadcast segments, that is, portions of files that are determined to have not been previously stored as recited in claim 19. Rieger III merely teaches determining if an entire program is received and stored, and not its progress.

Thus, claim 19 is not obvious over Foster et al in view of Rieger III.

4. Independent Claim 13 Is Not Obvious

In the Office Action, independent claim 13 is rejected under 35 U.S.C §103(a) as being obvious over Foster et al in view of U.S. Patent No. 5,815,671, to Morrison (hereinafter "Morrison").

Claim 13 recites a method for transmitting content comprising data files that involves (1) assigning each of the data files a message identification code to indicate which of a plurality of receivers in a digital broadcast system are to receive the corresponding data file; (2) partitioning the data files into segments; (3) assigning segments in respective data files with unique identification codes that indicate the order of the segments in a corresponding data file; and interspersing the segments in a broadcast signal, among other elements.

Morrison is relied on for its purported disclosure of message data codes in sent data. Applicants respectfully submit that Morrison does not overcome the deficiencies of Foster et al stated above. Morrison does not teach or suggest a data file characterized in a broadcast signal by a header indicating the number of segments that constitute the data file, among other aspects of the claimed invention.

Further, the STC in Foster et al discussed in the Office Action with respect to claim 13 is added at the receiver and therefore does not suggest a segment header in a broadcast signal as claimed. Applicants respectfully request withdrawal of this basis for rejecting claims 6, 7, 13-15, 20 and 21 under 35 U.S.C §103(a).

Thus, claims 13 is not obvious over Foster et al in view of Morrison.

5. Dependent claims 6, 7, 14, 15, 20 and 21 Are Not Obvious

In the Office Action, dependent claims 6, 7, 14, 15, 20 and 21 are also rejected under 35 U.S.C §103(a) as being obvious over Foster et al in view of U.S. Patent No. 5,815,671, to Morrison (hereinafter "Morrison"). These claims each have independent claim 1, 13 or 1 7 as a base claim. Applicants respectfully submit that Morrison does not overcome the deficiencies of Foster et al stated above. Morrison is relied on for its purported disclosure of message data codes in sent data. Morrison, however, does not teach or suggest a data file characterized in a broadcast signal by a header indicating the number of segments that constitute the data file, among other aspects of the claimed invention.

Thus, claims 6, 7, 14, 15, 20 and 21 are not obvious over Foster et al in view of Morrison.

6. Dependent claim 11 is Not Obvious

In the Office Action, claim 11 is rejected under 35 U.S.C §103(a) as being obvious over Foster et al in view of Rieger III and Morrison. None of these three references, however, singly or in combination teaches or suggests the invention recited in claims 1 or 10, the base and intervening claims from which claim 11 depends for reasons set forth herein.

Thus, claim 11 is not obvious over Foster et al in view of Rieger III and Morrison.

7. Dependent claims 8 and 16 Are Not Obvious

Finally, in the Office Action, dependent claims 8 and 16 are rejected under 35 U.S.C §103(a) as being obvious over Foster et al in view of Morrison and U.S. Patent Application Publication No. US 2003/0212996, to Wolzien (hereinafter "Wolzien").

Claims 8 and 16 each recite a message identification code that can correspond to receivers in vehicles of a particular manufacturer and at least one of a vehicle model and year of manufacture.

Paragraph [0058] of Wolzien is relied on for its purported disclosure of code identification information that identifies a type of car for a user profile to facilitate an automated push information operation. Applicants respectfully submit that Wolzien does not overcome the deficiencies of Foster et al or Morrison as stated above. Further, none of these three references

singly or in combination teaches or suggests the invention recited in claims 1 or 13, the base claims from which claims 8 and 16 depend for reasons set forth above. For example, Wolzien does not teach or suggest partitioning of a data file in a broadcast signal into segments and providing headers in the broadcast signal to indicate the number of segments in a data file, as recited in both of claims 1 and 13.

Thus, claims 8 and 16 are not obvious in view of over Foster et al in view of Morrison and Wolzien.

In view of the foregoing, Applicants respectfully request withdrawal of the 35 U.S.C §103(a) rejections of claims 2, 6- 8, 10, 11, 13-16 and 19 over U.S. Patent No. 6,801,536 to Foster et al. in view of the various cited secondary references.

C. Conclusion

For the reasons presented herein, Applicants submit that claims 1 – 21 are not anticipated under 35 U.S.C. § 102(b) or rendered obvious under 35 U.S.C. § 103(a) by the cited references of record. Accordingly, reversal of the final rejection is requested and allowance of claims 1 – 21 is respectfully requested.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1. (original) A receiver in a digital broadcast system comprising:

a memory device for storing content transmitted in a broadcast signal using said digital broadcast system, the content comprising data files, said data files each being partitioned into segments that are interspersed in said broadcast signal, said broadcast signal being provided with at least one header comprising information indicating the number of said segments that constitute at least one of said data files and information to identify each of said segments;

a reception device for receiving said broadcast signal and processing said broadcast signal to obtain at least part of said content including said segments corresponding to at least one of said data files therein; and

a processing device connected to said memory device and said reception device and being programmable to allocate at least one section in said memory device for storing the data file, to store said segments corresponding to the data file in said allocated section, and to monitor the progress of the storage of said segments in said allocated section.

2. (original) A receiver as claimed in claim 1, further comprising at least one output device connected to said processing device, said processing device being programmable to generate an alert message on said at least one output device when each of said segments corresponding to the data file has been stored in said memory device.

3. (original) A receiver as claimed in claim 1, wherein said at least one header comprises data to indicate how much of said memory device needs to be allocated to store the data file.

4. (original) A receiver as claimed in claim 1, wherein said segments are assigned unique identification codes that indicate their order in the data file, wherein said at least one header comprises segment headers for respective ones of said segments, said segment headers each comprising a first field indicating the total number of segments in the data file, and a second field indicating the corresponding one of said identification codes.

5. (original) A receiver as claimed in claim 4, wherein said processing device is operable to determine how much of said memory needs to be allocated to store the data file using said first field in the first one if said segments that is received.

6. (original) A receiver as claimed in claim 4, wherein said segment headers comprise an auxiliary data field comprising an expiration data for the data file corresponding thereto.

7. (original) A receiver as claimed in claim 4, wherein said digital broadcast system can be used to broadcast a plurality of messages that are each assigned a message identification code to indicate which of a plurality of receivers in said digital broadcast system are to receive the corresponding message, each of said plurality of messages comprising one of said data files, said segment headers further comprising a message identification code, said processing device being programmable to store at least one said message identification code and to discard said segments corresponding to said plurality of messages having a different said message identification code.

8. (original) A receiver as claimed in claim 7, wherein said message identification code can correspond to said receivers in vehicles of a particular manufacturer and at least one of a vehicle model and year of manufacture.

9. (original) A receiver as claimed in claim 1, wherein said at least one header provides a unique identification code for each of said segments belonging to the data file and indicates in what order said segments are to appear in the data file for playback, said processing device being programmable to determine which of said segments in the data file have not been received and stored in said memory device.

10. (original) A receiver as claimed in claim 9, wherein the data file is rebroadcast at least once, said processing device being operable to determine which of said segments corresponding to the data file have been stored and to store said segments that are rebroadcast if said segments

are not yet stored in said memory device, and to discard said segments that are rebroadcast if said segments were previously stored in said memory device.

11. (original) A receiver as claimed in claim 10, wherein said processing device is provided with rebroadcast information and is operable to automatically operate said receiver at a selected time of day to receive and store said segments that are not yet stored in said memory device using said rebroadcast information.

12. (original) A receiver as claimed in claim 1, wherein said memory device comprises a first portion for storing respective ones of said data files for which all of the corresponding said segments have been received, and a second portion for storing at least part of other said data files while said segments corresponding thereto are being received.

13. (original) A method of transmitting content comprising data files comprising the steps of:

assigning each of said data files a message identification code to indicate which of a plurality of receivers in said digital broadcast system are to receive the corresponding data file;

partitioning said data files each being partitioned into segments;

assigning said segments in respective said data files with unique identification codes that indicate the order of said segments in a corresponding one of said data files;

interspersing said segments in said broadcast signal; and

providing said broadcast signal with segment headers for respective said segments that each comprise a corresponding said message identification code, a first field indicating the total number of said segments in the corresponding one of said data files, and a second field indicating said identification code of the segment.

14. (original) A method as claimed in claim 13, further comprising the step of rebroadcasting said segments and corresponding said segment headers at least once

15. (original) A method as claimed in claim 13, wherein said segment headers comprise an expiration date for the corresponding one of said data files

16. (original) A method as claimed in claim 13, wherein said segment headers can correspond to said receivers in vehicles of a particular manufacturer and at least one of a vehicle model and year of manufacture.

17. (original) A method of implementing a file transfer from a broadcast station to a receiver in a digital broadcast system comprising the steps of:

receiving a broadcast signal having content, said broadcast signal comprising content comprising data files, said data files each being partitioned into segments that are interspersed in said broadcast signal, said broadcast signal being provided with at least one header comprising information indicating the number of said segments that constitute at least one of said data files and identifying each of said segments;

selecting one of said data files to store in a memory device;

allocating a portion of said memory device that corresponds in size to the number of said segments that constitute said selected data file;

analyzing said information in said at least one header to identify said segments received via said broadcast signal and corresponding to said selected data file; and

storing said segments in said portion of said memory device that correspond to said selected data file.

18. (original) A method as claimed in claim 17, further comprising the step of monitoring which of said segments corresponding to said selected data file have not yet been received and stored in said portion of said memory device

19. (original) A method as claimed in claim 17, wherein said selected data file is rebroadcast at least once, and further comprising the steps of:

analyzing said information relating to the rebroadcast said segments;

storing the rebroadcast said segments that are determined to have not been previously stored in said portion of said memory device; and

discarding the rebroadcast said segments that are in said portion of said memory device.

20. (original) A method as claimed in claim 17, wherein said receiver is provided with rebroadcast schedules for said data files and further comprising the steps of:

determining that said portion of said memory device is a selected percentage full;

determining via said rebroadcast schedules when the selected said data file is to be rebroadcast;

operating said receiver to automatically tune to said broadcast signal when the selected said data file is scheduled for rebroadcast;

extracting said segments corresponding to said selected data file have not yet been received and stored in said portion of said memory device; and

storing the extracted said segments in said portion of said memory device.

21. (original) A method as claimed in claim 17, wherein said data files are assigned message identification codes to indicate which of a plurality of receivers in said digital broadcast system are to receive the corresponding data file, said at least one header further comprising a message identification code, and further comprising the steps of:

storing at least one said message identification code in said memory device;

locating and storing said segments received via said broadcast signal that constitute the data file identified via the stored said message identification code; and

discarding said segments received via said broadcast signal that constitute said data files that are not identified via the stored said message identification code.

IX. EVIDENCE APPENDIX

No evidence under 37 C.F.R. § 1.130, 1.131 or 1.132 is relied upon in this Appeal.

X. RELATED PROCEEDINGS APPENDIX

None

PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	:	
PAUL D. MARKO et al.	:	Group Art Unit: 2611
Serial No.: 09/695,228	:	Examiner: Hai V. Tran
Filed: October 25, 2000	:	
For: METHOD AND APPARATUS FOR IMPLEMENTING FILE TRANSFERS TO RECEIVERS IN A DIGITAL BROADCAST SYSTEM	:	

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

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